March 27, 2002

MODIS sensor Working Group (MsWG) Summary

Attendance: Suraiya Ahmad, Bill Barnes, Bob Barnes, Stuart Biggar, Vincent Chiang, Wayne Esaias, Bob Evans, Chris Moeller, Gary Toller, Jack Xiong, Eric Vermote, Zhengming Wan, Joe Esposito

Scheduled Items

Item 1.   Terra MODIS Status

    BB)   MODIS went into safe mode on 03/19/2002 (2002078) after the orbital inclination maneuver was performed. An attempt was made to turn on the instrument but the formatter patch code did not upload correctly and the turn-on procedure failed. On 03/27/2002 (2002086) the instrument was turned on and a single word formatter patch was uploaded to inhibit the formatter from failing. The full patch table was then successfully uploaded and science mode was achieved. Later the instrument again went into safe mode upon formatter failure that may be due to the instrument temperature still being too low. The current configuration is safe mode with SVD open and NAD closed. A few more orbits are needed to stabilize the temperature. Option C – startup in Bside configuration – will be attempted if Aside cannot be switched on and MODIS cannot attain stable performance.

    JAE)   Update: PFM current Status – As of 03/28/2002 19:30 the instrument was powered up at roughly 2002087 19:30 and has been in science mode for more than 15 hours with NAD closed. SD calibrations will be done tonight and the NAD will be opened between these two times.

    JX)   MCST will compare most recent calibration results to calibration results after the instrument is back on to check for any changes or irregularities.

Item 2.   Aqua MODIS Status

    BB)   Loads due to the Main Engine Cut Off (MECO) are being investigated.
The main concern is the aft optics but calculations look good to go.
There is still a single battery (several?) cell not holding charge. The problem is being investigated and the tentative launch date has slipped to not before 04/24/2002. If a full battery change out were required then a slip of 5 to 8 weeks would occur in the launch date. The last checkout and uploads have gone well and there will be no further contact with FM1 until orbit is achieved.

Item 3.   L1B Status

    JX)   The new L1B code, version V4.0.0, is being delivered to the DAAC later today. It will be roughly 3 weeks before L1B V4.0.0 goes into production if needed.
L1B now has the B26 correction included with the flag currently set to off. MCST will wait for Chris Moeller's coefficients and a green light to turn the B26 correction flag to on. Bside coefficients are ready from Chris and work is progressing toward the development of Aside coefficients.
L1B V4.0.0 is still using the recent m1 delivery with Band 3 flattened after 2001272.1250.
MCST will send new L1B code and updated m1 LUTs to Miami for testing next week.

Around the Table

Participant: Chris Moeller – In response to Bill's question on frame offsets in the B26 correction.

CM) Ghosting around coastline images may be caused by out-of-band light reflecting from a fixed point on the focal plane.

JX) This cross talk depends upon the time of scene and not on geo-located pixels.

CM) There is possibly a 3-4 frame offset and a 5-6 frame offset for bands 26 and 24 respectively. When there is high radiance in Bands 5 and 7 the ghosting effect is larger. There may be multiple influences on B26. The offset needs to be applied to all scenes.

JX) The L1B V4.0.0 code has the ability to include frame offset. This is controlled by the LUTs. MCST tried to apply a "grand" cross talk correction that included this effect band to band.

CM) Met with MCST about $a0 = 0$ and see this causing the data to look more like pre-launch. We should compare this for all the TEB. If there is similar behavior for PV and PC, then I am suspicious about the a0 values of the PV TEB.

JX) Pre-launch cannot be used for the TEB PV bands due to the change of SAM electronics resistors.

Participant: Wayne Esaias – Did anyone look at along track scanning during the inclination yaw? The same geo-located real estate is seen for all angles.

BE) **Miami is taking out glint more effectively using a new algorithm**
We looked at actual radiance in L1 and saw that the original Cox-Munk glint correction inaccurately corrects the data. We scaled the Cox-Munk correction by 1.44 with several spectral factors and can now go from edge to saturation with very clean responses. This is an empirical approximation and the cross scan Tau is still not correct. Wind direction may affect this. The glint correction produces better tau retrieval.

Participant: Bob Barnes – Can the empirical Cox-Munk correction, used in Miami, be applied to other instruments? Bob Evans responded that they would look into this.